

1. Introduction

This document elaborates upon and spells out step-by-step details of the FSL recommended procedure for implementing OB2 WarnGen. This document references the corresponding steps in the FSL document. The FSL procedure is at <http://www-sdd.fsl.noaa.gov/~ramer/noaa/ob2-wgn/ob2-setup.html>. These documents describe AWIPS software configuration tasks; they do not include operational procedures for using the new OB2 WarnGen features (VTEC, followup, QC checks).

Unfortunately, the migration to OB2 WarnGen is fairly complex and requires customization of the default OB2 WarnGen templates. It is important to read all the instructions in each step or some important WarnGen files may be lost or corrupted. Many steps contain two parts:

Part A contains important background information

Part B contains step by step instructions

If a site is quite knowledgeable about localization, WarnGen configuration and template customization, they may devise their own implementation procedure - but receiving technical support for these custom methods will be difficult. Sites should be familiar with the entire FSL recommended procedure before they devise their own procedure.

If you have any questions about these instructions, please call Mike Rega at 301-713-0069 x170, Ashley Kells at 301-713-0069 x169, or Frank Lucadamo at 301-713-0069 x159.

2. Downloading FSL Script Files from NOAA1

One workstation will be selected to install the OB2 templates, customize and test them, and provide training in using the new OB2 WarnGen features. FSL calls this workstation the "migration host". The migration host can be either a Linux or HP workstation, but it must be a workstation on which WarnGen was routinely used in OB1. The migration host is converted between using OB1 and OB2 WarnGen templates by running a "-wwa" localization and restarting D2D, so a Linux workstation could be converted much more quickly than an HP workstation. Depending on local operational needs, the migration host can be used in various ways. The migration host can routinely use the OB1 templates and be converted to use the OB2 templates for customizing/testing/training shifts, then converted back to OB1 for operational use. A workstation that is not used very much could be exclusively set aside for the OB2 WarnGen customizing/testing/training during much of the OB2 transition period.

Several FSL scripts are used in the OB2 WarnGen implementation. The pre-install script was downloaded from the NOAA1 server during the OB2 pre-install (Part 0, step 11 of the AWIPS OB2 install instructions). The other scripts should be downloaded before proceeding. See

Attachment A of this document for details on downloading the other FSL scripts. The FSL scripts should be installed on the migration host (workstation).

3. OB2 Pre-install Instructions

3.A Background

IMPORTANT

This corresponds to the FSL step 1. **This step is already included in the OB2 pre-install instructions (Part 0, step 11, of the AWIPS installation instructions for OB2).** If you have completed the OB2 pre-install and the OB2 upgrade, please proceed to step 4 below.

The FSL script ob2warngenprep.csh will save a full set of OB1 WarnGen templates in /data/fxa/customFiles. The script will also back up the OB1 WarnGen templates and some WarnGen configuration files into the following three directories on ds1:

1. /data/fxa/ob1-wgn/localization/LLL - will have files *wwaConfig.template and *wwa*preWWA from /awips/fxa/data/localization/LLL on the workstation where the script is run.
2. /data/fxa/ob1-wgn/customFiles - will have all *wwa*preWWA files from /data/fxa/customFiles, file makeWWAtables.patch from /awips/fxa/data/localization/LLL on the workstation where the script is run, file makeWWAtables.patch from /data/fxa/customFiles (most sites will not have the makeWWAtables.patch file).
3. /data/fxa/ob1-wgn/localization/nationalData - will have file *wwaConfig.template and *wwa*preWWA files from ds1:/data/fxa/nationalData.

The FSL script ob2warngenprep.csh was downloaded from the NOAA1 server. The script is run as user fxa on a workstation that is routinely used for WarnGen and has a full set of operational OB1 WarnGen templates in /awips/fxa/data/localizationDataSets/LLL (where LLL is your site ID).

The script will make sure there is a full set of WarnGen OB1 templates in /data/fxa/customFiles. For any non customized OB1 templates, the script will put the default version from /data/fxa/nationalData into /data/fxa/customFiles.

If you have customized WarnGen templates for backup sites, you may want to take extra steps to save them. For example, if you provide service backup for site CTP, you may have customized CTP templates either on the workstation in /awips/fxa/data/localization/CTP/CTP-wwa*preWWA or on the ds in /data/fxa/customFiles/CTP-wwa*preWWA.

Script ob2warngenprep.csh will save backup site templates from /data/fxa/customFiles in

/data/fxa/ob1-wgn/customFiles. Any backup site templates on the workstations should be copied to /data/fxa/customFiles before ob2warnngenprep.csh is run. This will assure that they are backed up by ob2warnngenprep.csh. For example, if you back up site CTP, files /awips/fxa/data/localization/CTP/CTP-wwa*preWWA) should be copied to /data/fxa/customFiles/CTP-wwa*preWWA.

3.B Instructions

IMPORTANT

This corresponds to the FSL step 1. **This step is already included in the OB2 pre-install instructions (Part 0, step 11, of the AWIPS installation instructions for OB2).** If you have completed the OB2 pre-install and the OB2 upgrade, please proceed to step 4 below.

Any backup site templates on the workstations should be copied to /data/fxa/customFiles before ob2warnngenprep.csh is run. This will assure that they are backed up by ob2warnngenprep.csh. For example, if you back up site CTP, files /awips/fxa/data/localization/CTP/CTP-wwa*preWWA) should be copied to /data/fxa/customFiles/CTP-wwa*preWWA.

The OB2 WarnGen pre-install script must be run on a workstation where you normally run WarnGen and has all your customized WarnGen templates in /awips/fxa/data/localizationDataSets/LLL.

To run the FSL OB2 WarnGen pre-install script, log on to the WarnGen workstation as “fxa” and enter these commands:

- (1) **cd /awips/fxa/ob2warnngen**
- (2) **./ob2warnngenprep.csh**

4. OB2 Installation

Right after OB2 is installed, the OB1 customized templates will still be used by default. There will be no OB2 WarnGen features activated (no followup, no VTEC, no QC). The WarnGen GUI will have a followup item, but it will be empty.

5. Set Up One Workstation for OB2 WarnGen customization/testing/training

5.A Background

This corresponds to the FSL step 2. One workstation will be selected to install the OB2 templates, customize and test them, and provide training in using the new OB2 WarnGen features. FSL calls this workstation the "migration host". The migration host can be either a Linux or HP workstation, but it must be a workstation on which WarnGen was routinely used in OB1. The migration host is converted between using OB1 and OB2 WarnGen templates by

running a "-wwa" localization and restarting D2D, so a Linux workstation could be converted much more quickly than an HP workstation. Depending on local operational needs, the migration host can be used in various ways. The migration host can routinely use the OB1 templates and be converted to use the OB2 templates for customizing/testing/training shifts, then converted back to OB1 for operational use. A workstation that is not used very much could be exclusively set aside for the OB2 WarnGen customizing/testing/training during much of the OB2 transition period.

The migration workstation will have a special "customFiles" directory which contains a full set of OB2 WarnGen templates plus other configuration files from your ds1:/data/fxa/customFiles directory. The special "customFiles" directory is local to the migration host and is named /awips/fxa/awipsusr/ob2/customFiles. The FSL script ob2warngencustom.csh (downloaded from NOAA1) creates the special customFiles directory.

Before running ob2warngencustom.csh, all unneeded files should be removed from ds1:/data/fxa/customFiles. The script will copy all files from /data/fxa/customFiles to /awips/fxa/awipsusr/ob2/customFiles. If you have too much in /data/fxa/customFiles, you may fill up the /awips/fxa partition on your migration host.

While customization/testing/training is done in /awips/fxa/awipsusr/ob2/customFiles, don't make any WarnGen changes in /data/fxa/customFiles (other non-WarnGen changes are OK). In step 11 below (when the migration host is converted to use OB2 templates by default), the WarnGen files will be copied from /awips/fxa/awipsusr/ob2/customFiles back to /data/fxa/customFiles by FSL script ob2warngenconvert.csh. That means that any WarnGen changes made in /data/fxa/customFiles will be overwritten. The FSL script assumes that all WarnGen custom templates in customFiles are OB1 templates (hence obsolete). This also means that any backup site custom templates will be removed from customFiles.

It is important not to change any WarnGen files in /data/fxa/nationalData or the backup area ds1:/data/fxa/ob2-wgn/localization/nationalData during the migration period. In step 11 (where the migration host is changed to use OB2 templates by default), everything from the backup directory will be copied into /data/fxa/nationalData. That is, all the default OB2 WarnGen templates as well as the default wwaConfig.template will be copied to /data/fxa/nationalData.

The script ob2warngencustom.csh will also exclude any WarnGen SLS templates from the full set of OB2 templates that it creates in ob2/customFiles. If you want to use SLS WarnGen templates in OB2, you will need to manually copy files *wwa*sls*preWWA to ob2/customFiles.

The script ob2warngencustom.csh does the following:

1. Back up OB2 default templates in directory ds1:/data/fxa/ob2-wgn/localization/nationalData
2. Create a full set of OB2 default templates on the migration host in directory

/awips/fxa/awipsusr/ob2/customFiles. Also, all files from /data/fxa/customFiles will be copied to /awips/fxa/awipsusr/ob2/customFiles. Any site specific OB1 templates (from /awips/fxa/data/localizationDataSets/LLL/wwa*wwaProd where LLL is the local site ID) that don't exist in OB2 will exist in ob2/customFiles/wwa*preWWA but will contain only the text "Empty template." The SLS template will be excluded from /awips/fxa/awipsusr/ob2/customFiles. Backup site templates (files BBB-www_.*preWWA where BBB is the site you are backing up) will not be placed into ob2/customFiles. The OB1 default version of /data/fxa/nationalData/*wwaConfig.template will be placed in ob2/customFiles. File *wwaConfig.template is not updated in OB2, so your old version from OB1 /data/fxa/nationalData will be used. The *wwaConfig.template file will need to be customized later when the OB2 templates from ob2/customFiles are customized.

5.B Instructions to Set Up the Migration Workstation

IMPORTANT

If you have file makeWWAtables.patch, contact Mike Rega (301-713-0069 x170), Ashley Kells (301-713-0069 x169), or Frank Lucadamo (301-713-0069 x159) before doing anything else. The file makeWWAtables.patch may exist in /data/fxa/customFiles or on the workstation in /awips/fxa/data/localization/LLL. This file is used in the “-wwa” localization task and configures WarnGen GELTs or templates in a non-standard way.

IMPORTANT

Remove any unneeded files from /data/fxa/customFiles before proceeding. The script ob2warngencustom.csh will copy everything from customFiles to /awips/fxa/awipsusr/ob2/customFiles on the migration host. If you have too much in /data/fxa/customFiles, the /awips/fxa partition on the migration host may become full.

(1) Choose one workstation to be your migration workstation. For suggestions on selecting a migration workstation, see part 5.A above.

(2) If your migration workstation is a Linux box, log on to the migration workstation as “root” and enter the following two commands (if it is an HP box, skip to part (3) just below):

- (a) **cd /awips/fxa**
- (b) **chmod 775 awipsusr**

(3) Log on to the migration workstation as “fxa” and enter the following two commands:

- (a) **cd /awips/fxa/ob2warngen**
- (b) **./ob2warngencustom.csh**

IMPORTANT

During the OB2 WarnGen migration period, don't change any WarnGen files in /data/fxa/customFiles. During this period, WarnGen templates must only be changed on the migration host in /awips/fxa/awipsusr/ob2/customFiles. Non WarnGen changes in /data/fxa/customFiles are OK.

Also, don't make any changes to WarnGen files in /data/fxa/nationalData - they will be overwritten in step 11 by OB2 baseline WarnGen files from /data/fxa/ob2-wgn/localization/nationalData.

6. Switching Between OB1 and OB2 Templates on the Migration Host

6.A Background

This corresponds to the FSL step 3. FSL has provided 2 scripts (available from NOAA1). Script ob1-to-ob2.csh converts the migration host from using OB1 to OB2 templates. Script ob2-to-ob1.csh converts from OB2 to OB1 templates. They should be installed on the migration host in /awips/fxa/ob2warngen and run as user fxa. The scripts set the FXA_CUSTOM_FILES environment variable and run a "mainScript n -wwa" localization. After the script finishes, D2D needs to be restarted to use the new templates.

If you're not sure whether you're using OB1 or OB2 templates, bring up WarnGen and look at the new followup box on the WarnGen GUI. It is just under the "show hatching" button, in the top right section of the list of WarnGen products. If OB1 templates are active, the box will be empty. If the OB2 templates are active, the box will say something like "FOLLOW" or "UPDATE LIST" or "REISSUE".

6.B Instructions

Convert the migration host from using OB1 templates to use OB2 templates

- (1) On the migration workstation, exit D2D
- (2) Open a telnet window and become user "fxa". Enter the following commands:
 - (a) **cd /awips/fxa/ob2warngen**
 - (b) **./ob1-to-ob2.csh**

- (3) Wait for the localization to finish.

The next time that D2D is started, the OB2 templates will be active.

Additional steps need to be completed to test the new OB2 WarnGen functions (followup, VTEC

and QC). These are explained below in step 7.

Convert the migration host from using OB2 templates to use OB1 templates

(1) On the migration workstation, exit D2D

(2) Open a telnet window and become user “fxa”. Enter the following commands:

- (a) `cd /awips/fxa/ob2warngen`
- (b) `./ob2-to-ob1.csh`

(3) Wait for the localization to finish.

The next time that D2D is started, the OB1 templates will be active. The script ob2-to-ob1.csh will also disable VTEC and the OB2 QC checking.

7. Test the OB2 Default Templates (test followup and VTEC/QC)

7.A Background

This corresponds to the FSL steps 4 and 5. First, the OB2 default templates should be tested so you can see how they behave without being customized. All default OB2 templates that the site plans to customize or use operationally should be run through the QC checker now to be sure they pass QC. There are various AWIPS configuration items (non template related) that may cause QC to fail.

First the migration workstation must be changed to use OB2 templates (see step 6 above). To test followup, you need to use the “flat file” technique described below. To test VTEC/QC, you need to set the warnGenVTEC.mode and textQC.config files (see below). The QC checks are done by the text editor, not by WarnGen.

Testing VTEC and QC

If you are only testing VTEC/QC, the test product doesn't have to be saved in the text database. Use "create text" in WarnGen and examine the VTEC/QC items on the text editor. Use "exit" to exit the text editor and discard the WRK version of the product. Do not "save" or "send" the product. If you use “save” or “send”, the product will be saved in the text database and disseminated.

QC cannot be turned on and VTEC turned off. QC and VTEC must both be on or off. The QC check will quit immediately when it finds the VTEC line missing.

Here is a quick summary of the OB2 QC items that are checked (from the OB2 Release Notes):

1. proper UGC and VTEC codes
2. UGC line matching text counties, zones, etc.
3. internally consistent times
4. product type matching the Mass News Disseminator section and text in the first bullet
5. correct contents and format of the Mass News Disseminator and the first three bullets
6. "\$\$" at the end of the product

Testing WarnGen Followup

To test followup, the test product must be stored so that recent warnings can be placed in the followup area on the WarnGen GUI. FSL has a trick to let WarnGen see the "stored" products but not actually store them in the text database. The trick has the text editor send the WRK products to an ASCII file (instead of the text database) so you can view it. The WRK product is put in directory /data/fxa/flatText/CCCNXX with file name format "yyyymmdd_hhmm." At this point, the workstation thinks the product is in the text editor.

Next, to "store" the product in the text database (i.e. to have the product appear in the WarnGen followup list), you will need to manually move the product to a file in a directory under /data/fxa/flatText/CCCNXX. For example, for product LBBSVRLBB, "mv" the yyyymmdd_hhmm file to directory /data/fxa/flatText/LBBSVRLBB. You need to create a directory for each product you will be testing (LBBSVRLBB, LBBTORLBB, etc.). Step 7.B below explains the details.

An alternate, and less desirable method to test followup, is to actually store the product in the text database, but clearly indicate it is a test product. This is undesirable since when the product is stored in the database, the triggers will send the product to places like the NOAA Weather Radio, NOAA Weather Wire and the async product scheduler. To do this method, bring up WarnGen, select the appropriate options, set the storm and box location, then press "create text." When the product appears in the text editor, specify destination "000", then you can examine the product. Edit the product to make clear that it is a "TEST", then use "save" (instead of "send") to save it in the text database. It will not be transmitted on the AWIPS WAN, but using "000" will store it in the text database and set off the Informix triggers that send the product to the NOAA Weather Radio, NOAA Weather Wire and async product scheduler. This method should only be used if it is compatible with local operational procedures.

7.B Instructions

Enable VTEC and QC on the Migration Workstation

- (1) Set the migration workstation to use OB2 templates (see step 6.B above).
- (2) Exit D2D on the migration workstation

(3) Open a telnet window and become user “fxa”. Enter the following commands:

- (a) **cd /awips/fxa/data/localizationDataSets/LLL**
(LLL is the local site ID)
- (b) **echo ON > warnGenVTEC.mode**
- (c) **cp -p /dsdata/nationalData/textQC.config.VTEC textQC.config**

(4) Restart D2D (the next time the AWIPS text editor is started, it will do the OB2 QC)

Test VTEC and QC on the Migration Workstation

To test VTEC and QC, the migration workstation must first be changed to use OB2 templates (see step 6.B above) and VTEC/QC must be enabled (see previous step above).

Now WarnGen can be used to generate OB2 test products. Use "create text" in WarnGen and examine the VTEC/QC items in the text editor. Use "exit" to exit the text editor and discard the WRK version of the product. **DO NOT “SAVE” OR “SEND” THE PRODUCT.**

IMPORTANT

Do not "save" or "send" the product. If you use “save” or “send”, the product will be saved in the text database and disseminated.

Disable VTEC and QC on the Migration Workstation

This assumes that the migration workstation has been set to use OB2 templates (step 6.B above) and that VTEC/QC have been enabled. This step will change the migration workstation to use OB1 templates and also disable VTEC/QC.

(1) On the migration workstation, exit D2D

(2) Open a telnet window and become user “fxa”. Enter the following commands:

- (a) **cd /awips/fxa/ob2warngen**
- (b) **./ob2-to-ob1.csh**

(3) Wait for the localization to finish.

The next time that D2D is started, the OB1 templates will be active and the OB2 VTEC/QC will be disabled.

Initial Setup to Test WarnGen Followup on the Migration Workstation

To prepare to test WarnGen followup on the migration workstation, the following one time setup

must be done.

(1) Open a telnet window on the migration workstation and become user “fxa”. Enter the following command:

mkdir -p /data/fxa/flatText/CCCNXX (use literal “CCCNXX”)

(2) Enter the following three commands. The “CCCNXX” that is used must be correct for your site. The examples below are for site LWX, which has AFOS node WBC:

(a) **mkdir /data/fxa/flatText/WBCORLWX** (use your AFOS node and site ID)

(b) **mkdir /data/fxa/flatText/WBCSVRLWX** (use your AFOS node and site ID)

(c) **mkdir /data/fxa/flatText/WBCFFWLWX** (use your AFOS node and site ID)

(3) If your site has marine warning responsibility, enter the following command. Again, the “CCCNXX” must be correct for your site. The example is for site LWX:

mkdir /data/fxa/flatText/WBCSMWLWX (use your AFOS node and site ID)

This completes the one time setup for testing followup on the migration workstation.

Testing WarnGen Followup on the Migration Workstation

To test WarnGen followup, the migration workstation must first have been changed to use OB2 templates (see step 6.B above) and the one time setup to create the “flatText” directories must have been completed (see previous item above).

(1) Stop D2D on the migration workstation

(2) Open two “telnet” windows and become user “awipsusr” in both windows

(3) In one telnet window, enter these commands:

- (a) **setenv DISPLAY :0.0** (zero dot zero, not letter “oh”)
- (b) **setenv FXA_FLAT_FILE_TEXT TRUE**
- (c) **setenv FXA_WARNGEN_PRODUCT_ID CCCNXX**
(Use literal “CCCNXX”)
- (d) **cd /awips/fxa/bin**
- (e) **start-d2d -nokeypad** (this will start D2D)

Now WarnGen will send products to directory /data/fxa/flatText/CCCNXX (instead of the text editor) with a file name format `yyyymmdd_hhmm`.

In the other awipsusr telnet window, you can see WarnGen test products by looking at Unix files. In the other telnet window, enter the following command:

```
cd /data/fixa/flatText/CCCNXX      (use literal "CCCNXX")
```

If you created a product on 7/22/03 at 12:34Z, you would see a file named "20030722_1234". To see this product, enter the following command:

```
cat 20030722_1234
```

To make the workstation think the product has been stored in the text database and transmitted enter the following command (assuming the product was a WBCTORLWX):

```
mv 20030722_1234 ../WBCTORLWX      (use your AFOS node and site ID)
```

Followup products need to be stored in the directory with the product they succeed. That is, if an SVS follows a TOR, store it in the TOR directory. If an SVS follows a SVR, store it in the SVR directory.

IMPORTANT

When done testing, be sure to exit D2D and close both telnet windows. This will assure that the flatText setting is removed from the workstation. Also be sure to change the workstation back to use OB1 templates (last section of step 6.B above).

If these two precautions are not taken, someone may accidentally issue an OB2 WarnGen product containing VTEC or a WarnGen product may accidentally be saved to the flat file instead of being stored in the text database and transmitted.

8. Customize the OB2 Templates

This corresponds to the FSL step 6. You should begin with OB2 default templates on the migration host (in /awips/fixa/awipsusr/ob2/customFiles) and add your custom changes.

IMPORTANT

Don't begin with your customized OB1 templates and try to add the OB2 new features. There are many changes to the OB2 templates. It would be very easy to break something in OB2 if you start with the customized OB1 templates and try to add the new OB2 functionality.

The FSL document contains links to an FSL web site with copies of 10 critical OB2 templates that show which text can be modified and which should be left alone. The text in bold font on the web site should be left alone, the regular font items can be customized. Some of the bold text can be modified if you're familiar with template syntax.

The ten marked up templates for which FSL provides HTML links are:

wwa_svr_preWWA (SVR)
wwa_tor.preWWA (TOR)
wwa_svrwx_sta_county.preWWA (SVS)
wwa_ffw.preWWA (FFW)
wwa_ffw_svr.preWWA (FFW with SVR)
wwa_dam_break.preWWA (non convective FFW)
wwa_fflood_sta_county.preWWA (FFS)
wwa_fflood_sta.preWWA (non convective FFS)
wwa_specmarine.preWWA (SMW)
wwa_mar_wx_sta.preWWA (MWS)

These are the OB2 templates that contain VTEC and these will be the most difficult to customize.

The other OB2 WarnGen templates have only minor changes. In general, the hard coding of KDEN was removed from the WMO heading and "\$\$" was placed at the end of the product.

OB2 supplies a legacy SVR template with no VTEC named wwa_svrwx_sta.preWWA. Be careful if you already have a customized OB1 template with this name.

OB2 also supplies a brand new template that did not exist in OB1. This is file wwa_mws_nosmw.preWWA - a MWS when no SMW was issued. This template contains no VTEC.

To make minor template changes, it is easiest to make changes in the localizationDataSets/LLL/wwa*wwaProd files and test these in WarnGen. When you know that your customizations work, then add your changes to /awips/fxa/awipsusr/ob2/customFiles, then localize.

Special Note on Customizing the OB2 WarnGen Product Type Menu

IMPORTANT

You likely will need to change file wwaConfig.template on the migration host to have WarnGen restore your customized WarnGen product list and to use the correct OB2 templates.

The directory /awips/fxa/awipsusr/ob2/customFiles uses the default version of wwaConfig.template from /data/fxa/nationalData. The default version of wwaConfig.template was not changed for OB2, so ob2/customFiles will have whatever *wwaConfig.template file was left over from OB1 nationalData. As a result, you likely will need to edit *wwaConfig.template.

File *wwaConfig.template should be edited in /awips/fxa/awipsusr/ob2/customFiles. After the

editing, enter the following commands on the migration workstation as user “fxa”:

```
(1)  cd /awips/fxa/data/localization/scripts
(2)  setenv FXA_CUSTOM_FILES /awips/fxa/awipsusr/ob2/customFiles
(3)  ./mainScript.csh n -wwa
```

The localization switch above is “n”, not “-n”. The “n” tells localization to use the /ob2/customFiles path instead of using /data/fxa/customFiles.

The localization output file corresponding to customFiles/*wwaConfig.template is /awips/fxa/data/localizationDataSets/LLL/wwa.config (where LLL is your site ID). After localization finishes, D2D must be restarted to use the updated WarnGen product list.

The OB1 customized version of *wwaConfig.template should still exist in /awips/fxa/data/localization/LLL/LLL-wwaConfig.template. If you completed the OB2 WarnGen pre-install procedures (Part 0, step 11, of the OB2 AWIPS install instructions), the OB1 customized *wwaConfig.template was saved in /data/fxa/ob1-wgn/localization/LLL.

In step 11 below, all OB1 versions of *wwaConfig.template will be removed (in /data/fxa/customFiles and in /awips/fxa/data/localization/LLL). At this time, the customized OB2 *wwaConfig.template will be copied from /awips/fxa/awipsusr/ob2/customFiles to /data/fxa/customFiles.

In OB2, the override for /data/fxa/customFiles/*wwaConfig.template works, so the customized version of *wwaConfig.template should be in /data/fxa/customFiles.

9. Test OB2 Customized Templates

Test all OB2 templates (both customized and default templates) that you plan to use operationally to be sure that they pass the OB2 QC checker. Also, be sure that wwaConfig.template is set up to use the proper OB2 templates.

10. Train the Forecasters

10.A Background

This corresponds to the FSL step 7. After the full operational set of OB2 WarnGen templates has been tested, then the staff can be trained in using OB2 WarnGen followup, VTEC and QC.

10.B Instructions

Testing VTEC and OB2 QC on the Migration Workstation

(1) Set the migration workstation to use OB2 templates (step 6.B above).

(2) On the migration workstation, exit D2D.

(3) Open a telnet window, become user “fxa” and enter the following commands:

- (a) `cd /awips/fxa/data/localizationDataSets/LLL`
(LLL is the local site ID)
- (b) `echo TEST > warnGenVTEC.mode`
- (c) `cp -p /dsdata/nationalData/textQC.config.VTEC textQC.config`

(4) Restart D2D (the next time the AWIPS text editor is started, it will do the OB2 QC).

Now the forecaster can test the VTEC and QC functions. When the product pops up in the text editor, the VTEC will be in the "must modify" markers (!** **!). The OB2 QC will run on the text workstation and you will see messages about any items that fail QC.

The test product must not be saved in the text database. Use "create text" in WarnGen and examine the VTEC/QC items on the text editor. Use "exit" to exit the text editor and discard the WRK version of the product. **DO NOT “SAVE” OR “SEND” THE PRODUCT.**

IMPORTANT

Do not "save" or "send" the product. If you use “save” or “send”, the product will be saved in the text database and disseminated.

The product will not be transmitted unless the !** **! markers are removed. If you really want to transmit the product, remove the VTEC line, override the QC complaint that VTEC is missing, edit the product to make sure it is clearly a “TEST”, then use “save” or “send.”

The following shows the proper way to label a product heading as a test:

BULLETIN - EAS ACTIVATION REQUESTED
TEST...SEVERE THUNDERSTORM WARNING...TEST
NATIONAL WEATHER SERVICE PUEBLO CO
619 PM MDT SUN JUN 29 2003

Testing OB2 WarnGen Followup on the Migration Workstation

To test WarnGen followup, the migration workstation must first have been changed to use OB2 templates (see step 6.B above) and the one time setup to create the “flatText” directories must have been completed (see step 7.B above).

(1) Stop D2D on the migration workstation

(2) Open two “telnet” windows and become user “awipsusr” in both windows

(3) In one telnet window, enter these commands:

- (a) **setenv DISPLAY :0.0** (zero dot zero, not letter “oh”)
- (b) **setenv FXA_FLAT_FILE_TEXT TRUE**
- (c) **setenv FXA_WARNGEN_PRODUCT_ID CCCNNNXXX**
(Use literal “CCCNNNXXX”)
- (d) **cd /awips/fxa/bin**
- (e) **start-d2d -nokeypad** (this will start D2D)

Now WarnGen will send products to directory /data/fxa/flatText/CCCNNNXXX (instead of the text editor) with a file name format yyyymmdd_hhmm.

In the other awipsusr telnet window, you can see WarnGen test products by looking at Unix files. In the other telnet window, enter the following command:

cd /data/fxa/flatText/CCCNNNXXX (use literal “CCCNNNXXX”)

If you created a product on 7/22/03 at 12:34Z, you would see a file named “20030722_1234”. To see this product, enter the following command:

cat 20030722_1234

To make the workstation think the product has been stored in the text database and transmitted enter the following command (assuming the product was a WBCTORLWX):

mv 20030722_1234 ../WBCTORLWX (use your AFOS node and site ID)

Followup products need to be stored in the directory with the product they succeed. That is, if an SVS follows a TOR, store it in the TOR directory. If an SVS follows a SVR, store it in the SVR directory.

IMPORTANT

When done testing, be sure to exit D2D and close both telnet windows. This will assure that the flatText setting is removed from the workstation. Also be sure to change the workstation back to use OB1 templates (last section of step 6.B above).

If these two precautions are not taken, someone may accidentally issue an OB2 WarnGen product containing VTEC or a WarnGen product may accidentally be saved to the flat file instead of being stored in the text database and transmitted.

11. Implement OB2 Customized Templates

11.A Background

This step converts all WFO workstations to operationally use (by default) the customized OB2 templates. When this is done, the new WarnGen follow up feature will be operating, but VTEC and the OB2 QC will not be active. All forecasters should have had training by this time at least in using the new WarnGen follow up. Training in VTEC and new QC could be done after this by setting up VTEC TEST mode on one workstation and also enabling QC on the text workstation.

This corresponds to the FSL part 8. First, permanently convert the migration workstation to use all customized OB2 templates by default. Next, convert all other workstations to use the customized OB2 templates by default.

The FSL script `ob2warnngenconvert.csh` (downloaded from NOAA1) converts the migration host to using the customized OB2 templates by default. The script must be run on the migration host by user "fxa." `ob2warnngenconvert.csh` will copy WarnGen related files from `/awips/fxa/awipsusr/ob2/customFiles` to `/data/fxa/customFiles`.

Before running `ob2warnngenconvert.csh`, beware that it will delete any backup site customized templates from `/data/fxa/customFiles`. That is, if you provide service backup for site CTP, any templates such as `/data/fxa/customFiles/CTP-wwa*preWWA` will be removed by `ob2warnngenconvert.csh`. If you completed the OB2 WarnGen pre-install procedures (step 3.B above), the backup site templates were saved in `/data/fxa/ob1-wgn/customFiles`. If you did not complete the OB2 WarnGen pre-install procedures, any backup site customized templates in `/awips/fxa/data/localization/BBB/BBB-wwa*preWWA` (where BBB is the backup site ID) should still exist.

The script `ob2warnngenconvert.csh` will delete all the OB2 WarnGen files (`*wwa_*.preWWA` and `*wwaConfig.template`) from `/data/fxa/nationalData`. `ob2warnngenconvert.csh` will then copy all WarnGen related files (`*wwa_*.preWWA` and `*wwaConfig.template`) from the backup area `/data/fxa/ob2-wgn/localization/nationalData` to `/data/fxa/nationalData`. During the OB2 WarnGen transition period (after OB2 is installed and script `ob2warnngenconvert.csh` is run) we assume that no AWIPS maintenance releases will update WarnGen files in `/data/fxa/nationalData`.

All OB1 WarnGen files in `/data/fxa/customFiles` are deleted by `ob2warnngenconvert.csh`. The script copies the following WarnGen files from `/awips/fxa/awipsusr/ob2/customFiles` to `/data/fxa/customFiles`:

1. files `*wwa_*.preWWA`
2. files `*wwaConfig.template`
3. files `*makeWWAtables.patch` (if they exist).

All OB1 versions of *wwaConfig.template are removed (in /data/fxa/customFiles and in /awips/fxa/data/localization/LLL). The customized OB2 *wwaConfig.template is copied from /awips/fxa/awipsusr/ob2/customFiles to /data/fxa/customFiles. In OB2, the override for /data/fxa/nationalData/*wwaConfig.template works, so the customized *wwaConfig.template file must be in /data/fxa/customFiles.

After verifying that the migration host works OK, there is another FSL script to run to convert each of the other workstations to use OB2 templates by default. The script was downloaded from NOAA1 and is named ob2warnngenworkstation.csh. The script is run on each workstation by user fxa.

11.B Instructions

IMPORTANT

Before running ob2warnngenconvert.csh, beware that it will delete any backup site customized templates from /data/fxa/customFiles. That is, if you provide service backup for site CTP, any templates such as /data/fxa/customFiles/CTP-wwa*preWWA will be removed by ob2warnngenconvert.csh. If you completed the OB2 WarnGen pre-install procedures (step 3.B above), the backup site templates were saved in /data/fxa/ob1-wgn/customFiles. If you did not complete the OB2 WarnGen pre-install procedures, any backup site customized templates in /awips/fxa/data/localization/BBB/BBB-wwa*preWWA (where BBB is the backup site ID) should still exist.

Convert the Migration Workstation to Permanently Use OB2 Templates

- (1) On the migration workstation, exit D2D
- (2) Open a telnet window and become user “fxa”. Enter the following commands:
 - (a) **cd /awips/fxa/ob2warnngen**
 - (b) **./ob2warnngenconvert.csh**

- (3) After the localization finishes, restart D2D

Test the migration workstation to make sure WarnGen is working OK with the OB2 templates. When this is done, the following is done to convert each of the other workstations.

Convert All Workstations to Permanently Use OB2 Templates

The following three steps need to be done for each workstation (except for the migration workstation).

- (1) On the workstation, exit D2D

(2) Open a telnet window and become user “fxa”. Enter the following commands:

- (a) **cd /tmp**
- (b) **rcp -p ws#:/awips/fxa/ob2warngen/ob2warngenworkstation.csh .**
(ws# is the name of the migration workstation e.g. ws2,
the command ends with <SPACE><PERIOD>)
- (c) **./ob2warngenworkstation.csh**

(3) After the localization finishes, restart D2D and test to make sure that WarnGen is working OK with the OB2 templates.

In step (2)(c) above, the script ob2warngenworkstation.csh runs a “-wwa” localization, so these procedures can only be done on one workstation at a time.

12. VTEC/QC Implementation Date

This corresponds to the FSL part 9. When the VTEC implementation date/time arrive (estimated to be during early December, 2003), all sites will switch on the VTEC and QC flags. Further instructions will be provided when the VTEC implementation date approaches.

13. Service Backup Issues

If you need to provide service backup for another site during the OB2 WarnGen migration period, you may need to devise alternate WarnGen backup procedures. Your site may be using OB1 WarnGen templates and the site you are backing up may be using OB2 templates (or the reverse may be true).

After the WarnGen OB2 implementation is complete and your local OB2 templates are working fine, you should put any customized OB2 backup site templates in /data/fxa/customFiles. That is, if you back up site CTP, you may have customized CTP WarnGen templates like ws1:/awips/fxa/data/localization/CTP/CTP-wwa*preWWA. These should be moved to /data/fxa/customFiles/CTP-wwa*preWWA.

14. Clean up

After VTEC has been operational for a while and the OB2 templates are working OK, go back and remove the various temporary directories that were created:

```
/data/fxa/ob1-wgn/localization/LLL
/data/fxa/ob1-wgn/customFiles
/data/fxa/ob1-wgn/localization/nationalData
/data/fxa/ob2-wgn/localization/nationalData
/awips/fxa/awipsusr/ob2/customFiles (on the migration host)
/awips/fxa/ob2warngen (on the migration host)
```

Attachment “a” - After OB2 installation WarnGen Procedure to Obtain FSL scripts

FSL scripts to facilitate warngen customization, training, and activation were placed on the NOAA1 server in pub/ob2warngen. To obtain the scripts do the following:

- (1) This is done on the OB2 WarnGen migration workstation. See part 2 for suggestions on selecting a migration workstation. On the migration workstation, open a telnet window, log into the ws# as root, then switch to the FXA user.

```
rlogin ws# -l root  
su - fxa
```

- (2) Go to directory /awips/fxa/, create a directory called ob2warngen, then cd into that directory. Sites that did part 0, step 11 may have already created the ob2warngen directory. If the directory already exists,

- a. **cd /awips/fxa**

Sites that did part 0, step 11 (of the OB2 install instructions) may have already created the ob2warngen directory under awips/fxa. If the directory already exists, skip step B and go to step C.

- b. **mkdir ob2warngen**
- c. **cd ob2warngen**

- (3) Connect to the NOAA1 ftp server by entering the command:

```
ftp 165.92.25.15
```

Once you are connected, login as user **ftp**, with your email address as the password.

- (4) The FSL scripts were placed in the pub/ob2warngen directory on the NOAA1 ftp server. To obtain the scripts do the following:

- a. **ascii**
- b. **hash**
- c. **cd /pub/ob2warngen**
- d. **mget ob***
- e. **bye**

- (5) Set permissions.

- a. **chmod 775 ob***
- b. **chown fxa:fxalpha ob***